

Amendments To The Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A pyroelectric compound comprising:

Inorganic, quasi-amorphous oxide compound of a metal, a mixture of metals, or a semi conducting element compound,

wherein said pyroelectric compound is an inorganic, quasi-amorphous oxide compound having pyroelectric pyroelectric properties.

2. (Withdrawn) The compound of claim 1 having the formula (AxB_{1-x})pOn,

wherein A and B are independently selected from transitions metals, elements of Group IVA of the periodic table, alkali metals, alkali earth metals and rare earth metals; x has values of between 0 to 1; p is an integer having the values 1, 2 or 3; and n is an integer having the value of 1, 2, 3 or 4.

3. (Withdrawn) The compound of claim 2, wherein A is a transition metal or an element of Group IVA of the periodic table, x is 1 and p is 2.

4. (Original) The compound of claim 1, having the formula (A_xB_{1-x})(C_yD_{1-y})O_n

wherein A and B are independently selected from alkali metals, alkali earth metals, rare earth metals and elements of Group IVA of the periodic table; C and D are independently selected from transition metals and alkali earth metals; x and y have values of between 0 to 1; and n is an integer having the value of 1, 2 or 3.

5. (**Original**) The compound of claim 4, wherein A and B are independently selected from Ba, Sr, Ca, Pb, La, Eu, Li, Na, K and Cs ; C and D are independently selected from Ti, Zr, Nb, Ta, Sc, Mg and V; and n is 3.

6. (**Original**) The compound of claim 5, wherein A and B are independently selected from Ba, Sr, Ca, Pb, La and Eu.

7. (**Original**) The compound of claim 5, wherein A and B are independently selected from Li, Na, K and Cs.

8. (**Original**) The compound of claim 5, wherein C and D are independently selected from Ti and Zr.

9. (**Original**) The compound of claim 6, wherein C and D are independently selected from Ti and Zr.

10. (**Original**) The compound of claim 7, wherein C and D are independently selected from Ti and Zr.

11. (**Original**) The compound of claim 5, wherein C and D are independently selected from Nb, Ta, Sc, Mg and V.

12. (**Original**) The compound of claim 6, wherein C and D are independently selected from Nb, Ta and V.

13. (**Original**) The compound of claim 7, wherein C and D are independently selected from Nb, Ta and V.

14. (**Original**) Inorganic, quasi-amorphous compound of claim 4, wherein y=0 and having the formula $(A_xB_{1-x})DO_3$, whcrein A, B, D and x are as defined in claim 4.

15. (**Original**) The compound of claim 4 having a pyroelectric coefficient of between about 10^{-12} C/(cm² x K) and about 10^{-7} C/(cm² x K).

16. (**Original**) The compound of claim 14 having a pyroelectric coefficient of between about 10^{-12} C/(cm² x K) and about 10^{-7} C/(cm² x K).

17. (**Original**) The compound of claim 4 selected from BaTiO₃, CaTiO₃, PbTiO₃, Pb(ZrTi)O₃, Pb(Zr_{0.35}Ti_{0.65})O₃, (PbCa)TiO₃, (PbLa)(ZrTi)O₃, PbLaTiO₃, Pb(ScTa)O₃, Pb(ScNb)O₃, Pb(MgNb)O₃, SrTiO₃, (Sr_{0.65}Ba_{0.35})TiO₃, (Ba_{0.70}Sr_{0.30})TiO₃ and EuTiO₃.

18. (**Original**) The compound of claim 17 having a pyroelectric coefficient of between about 10^{-12} C/(cm² x K) and about 10^{-7} C/(cm² x K).

19. (**Original**) The compound of claim 17 being selected from BaTiO₃, PbTiO₃ and SrTiO₃.

20. (**Original**) The compound of claim 18 being BaTiO₃.

21-23. (Cancelled)

24. (**Withdrawn-Currently Amended**) Inorganic quasi-amorphous compound of the formula $(AxB1-x)(CyD1-y)O_3$,

wherein A and B are independently selected from alkali metals, alkali earth metals, rare earth metals and elements of Group IVA of the periodic table;

C and D are independently selected from transition metals and alkali earth metals;

x and y have values of between 0 to 1[,];

lacking spatial periodicity; and

preparable by applying a mechanical strain to a substantially amorphous compound of the formula $(AxB1-x)(CyD1-y)O_n$ wherein n is an integer having the value of 1, 2 or 3, said mechanical strain being controlled so as to prevent crystallization of said compound,
thereby obtaining inorganic quasi-amorphous compound having pyroelectric properties..

25. (**Original**) A device comprising the compound according to claim 1 in the form of a film coating on a substrate.

26. (**Original**) A device comprising the compound according to claim 4 in the form of a film coating on a substrate.

27. (**Original**) The device of claim 26, wherein the substrate is selected from Si, SiO₂ and glass.

28. (**Original**) The device of claim 27, wherein the thickness of the coating layer is below 0.5 micron.

29. (**Currently Amended**) A device comprising the compound of claim 1, the device being operable as a sensor for sensing an external field including at least one of the following: temperature field, magnetic field-field and electric field.

30. (**Currently Amended**) A device comprising the compound of claim 4, the device being operable as a sensor for sensing an external field including at least one of the following: temperature field, magnetic field-field and electric field.

31. (**Original**) A device having an acoustic wave propagation element including the compound of claim 1.

32. (**Original**) A device having an acoustic wave propagation element including the compound of claim 4.

33. (**Original**) A device having an acoustic wave propagation element including the compound of claim 5.

34. (**Original**) A birefringent medium comprising the compound of claim 1.

35. (**Original**) A birefringent medium comprising the compound of claim 4.

36. (**Original**) A device comprising the compound according to claim 1.

37. (**Original**) A device comprising the compound according to claim 4.

38. (**Withdrawn**) A device comprising a compound according to claim 3 in the form of a film coating on a substrate.

39. (**Withdrawn**) The device of claim 38, wherein the substrate is selected from Si, SiO₂ and glass.

40. (**Withdrawn**) The device of claim 39, wherein the compound is SiO₂.

41. (**New**) The pyroelectric compound of claim 1, which is a non-crystalline ionic solid having macroscopic polarization and a lack of spatial periodicity.